



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/616,498	07/14/2000	Narayanan S. Ramabhadran	26530.16	6991

27683 7590 02/23/2004

HAYNES AND BOONE, LLP
901 MAIN STREET, SUITE 3100
DALLAS, TX 75202

EXAMINER

QURESHI, SHABANA

ART UNIT	PAPER NUMBER
----------	--------------

2155

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/616,498

Applicant(s)

RAMABHADRAN, NARAYANAN S.

Examiner

Shabana Qureshi

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/11-27-00</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-13 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,108,645, issued to Matthias Eichstaedt et al.

Regarding claims 1 and 8, Eichstaedt teaches a method for matching a published event with one or more subscribers in a content-based publish-subscribe system in a computer network, each subscriber having one or more predetermined predicates, the method comprising:

- creating in a top-down fashion a virtual Direct Acyclic Graph (DAG) including one or more arbitrary boolean tests representing the predetermined predicates so that common predicates shared by the subscribers are examined first and a minimum number of boolean tests are thus conducted to identify the matching subscriber (column 2, lines 10-18; column 2, lines 45-50);
- eliminating, upon publishing the event, one or more subscribers, at least one of whose predicates is not satisfied while the DAG is traversed (column 2, lines 7-10); and
- identifying at least one matching subscriber if all the predicates of the matching subscriber are satisfied (column 5, lines 59-67),

- wherein the DAG has a root node, one or more leaf nodes representing subscribers, and one or more non-leaf nodes representing the boolean tests which are formed by boolean connectors (column 7, lines 48-53).

As per claim 2, Eichstaedt teaches the method of claim 1 wherein the step of creating further includes constructing the DAG in a top-down fashion including one or more arbitrary boolean tests representing the predetermined predicates so that common predicates shared by the subscribers are examined first and a minimum number of boolean tests are thus conducted to identify the matching subscriber (column 2, lines 10-18; column 2, lines 45-50).

As per claims 3 and 9, Eichstaedt teaches the method of claims 2 and 8, further comprising adding new predicates of a new subscriber to the DAG recursively starting from the root node, and adding a leaf node at any node in the DAG where the Boolean test at the node is satisfied (column 8, lines 49-53).

As per claims 4 and 10, Eichstaedt teaches the method of claims 1 and 8, wherein each non-leaf node directs toward other leaf nodes or non-leaf nodes based on the results of the Boolean test at the non-leaf node (column 7, lines 41-67).

As per claims 5 and 11, Eichstaedt teaches the method of claims 4 and 10, wherein the boolean test result is one of TRUE, FALSE, or NULL (column 8, lines 20-33).

As per claims 6 and 12, Eichstaedt teaches the method of claims 1 and 8, wherein the boolean connectors are AND, OR, NOT and parenthesis (Figure 10B, column 2 lines 15-18).

As per claims 7 and 13, Eichstaedt teaches the method of claims 1 and 8, wherein the predetermined predicate includes an atomic test, a disjunction of sub predicates, a conjunction of sub predicates, or a negation of a sub predicates (column 11, lines 5-50).

Art Unit: 2155

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shabana Qureshi whose telephone number is (703) 308-6118.


The examiner can normally be reached on Monday - Friday, 8:30am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on (703) 308-6662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shabana Qureshi
Examiner
Art Unit 2155

February 9, 2004


SHAHID ALAM
PRIMARY EXAMINER